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AMENDMENTS TO THE SPECIFICATION:

Please amend the specification by inserting, at Page 1 (after the title and before line 2), the following sentence:

CROSS-REFERENCE TO RELATED APPLICATION

This Application claims benefit of Provisional Application No. 60/465,214, filed April 25, 2003; the disclosure of which is incorporated herein by reference.

Page 7, lines 5-18, are amended as follows:

DETAILED DESCRIPTION OF THE INVENTION

In one embodiment, the present invention relates to congenic rats which produce a GPR10 mutant that is 64 amino acids shorter from N-terminal than wild-type GPR10. That is, a congenic rat comprising a mutant GPR10 gene, wherein said congenic rat is obtained by crossing a Otsuka Long-Evans Tokushima Fatty (~~OTELF~~OLETF) rat (ATCC No. 72016) with a wild-type rat, and wherein said congenic rat exhibits a prolonged immobilization time when assayed in a forced swimming test compared to said wild-type rat and anti-anxiety behavior in an elevated plus-maze test compared to said wild-type rat.

Page 9, lines 4-7, are amended as follows:

In addition, the present invention relates to an isolated fragment of ~~mutant~~ human GPR10 consisting essentially of the amino acid sequence of SEQ ID NO:10.

Page 15, lines 16-29, are amended as follows:

The host cell mentioned above may be a prokaryotic cell or an eukaryotic cell. As the prokaryotic host, *Escherichia coli*, *Bacillus ~~subtilits~~ subtilis* and other common bacteria can be employed and preferably cells of *Escherichia coli*, particularly cells of *Escherichia coli* K12, can be employed. The eukaryotic

host cell includes cells of vertebrates and yeasts and the former include the monkey cell line COS (*Cell*, 23:175 (1981)), Chinese hamster ovarian cells, and the dihydrofolate reductase-defective cells thereof (*Proc. Natl. Acad. Sci., USA.*, 77:4216 (1980)). As the latter, yeast cells of the genus *Saccharomyces* can be used, but these are not exclusive choices.

Page 15, line 30 to Page 16, line 13, is amended as follows:

When prokaryotic cells are used as host cells, an expression plasmid construct prepared by using a vector which is replicable in the particular host cell and adding a promoter and SD (Shine and Dalgarno) sequence upstream of the gene of the invention so that the gene may be expressed therein as well as an initiation codon (e.g., ATG) necessary for initiation of protein synthesis can be used. As the vector mentioned above, it is usual to employ plasmids derived from *Escherichia coli*, such as pBR322, pBR325, pUC12, pUC13, etc. However, these are not exclusive choices but various known vectors can be utilized. Examples of the commercial vectors for use in expression systems using *E. coli* include pGEX-4T (Amersham Pharmacia Biotech), pMAL-C2, ~~pMA1-P2~~pMAL-P2 (New England Biolabs), pET21, pET21/lacq (Invitrogen) and pBAD/His (Invitrogen).

Page 16, lines 14-30, are amended as follows:

As the expression vector for use when cells of a vertebrate are used as host cells, the vector having a promoter upstream of the gene of the invention to be expressed, RNA splice sites, polyadenylation site and a transcription termination sequence is usually employed, and this vector may further have a replication origin where necessary. A specific example of the expression

vector is pSV2dhfr harboring an early promoter of SV40 (*Mol. Cell. Biol.*, 1:854 (1981)). Aside from the above, various known vectors available commercially can be employed. Examples of the commercial vectors which are used in expression systems using animal cells include vectors for animal cells, such as pEGFP-N, pEGFP-C (CLONTECH), pIND (Invitrogen), pcDNA3.1/His (Invitrogen), etc., and vectors for insect cells, such as pFastBac HT (~~Gibci~~ Gibco BRL), pAcGHLT (PharMingen), pAc5/V5-His, pMT/V5-His and pMT/Bip/V5-his (all Invitrogen).

Page 27, line 30 to Page 28, line 10, is amended as follows:

The following is a specific example of determination of said wild-type and/or mutant GPR10. The ~~anti-GR10~~anti-GPR10 antibody can be used to immunoprecipitate GPR10 polypeptide from a solution containing a biological sample obtained from a body, such as blood or serum or can be reacted with the GPR10 polypeptide on polyacrylamide gel of Western blot or immunoblot. The GPR10 polypeptide in a paraffin section or frozen tissue specimen can be detected by an immunohistochemical technique using the anti-GPR10 antibody. The antibody production and purification technology are well-known in the art and suitable techniques can be selectively employed.

Page 28, lines 18-22, are amended as follows:

As noted above, the invention also relates to vectors (e.g., expression vectors) comprising a nucleic acid sequence encoding rat and human GPR10 and mutant GPR10, e.g., the vectors as described in Example 1-2 below.

Page 40, line 7 to Page 41, line 2, is amended as follows:

[^{125}I]PrRP Competition Binding Assay for Detecting Compounds That Bind to Cloned Wild-type GPR10

Chinese hamster ovary cell lines are generated that stably express cloned wild-type GPR10 receptors (~~pcNDA3.1~~pcDNA3.1(+)-hGPR10:CHO-hGPR10 cells) using the methods described in Examples 2-3 below. CHO-hGPR10 cells are cultured until approximately 70% confluent, washed three times with ice-cold homogenization buffer comprising 20 mM HEPES/Na HEPES and 10 mM EDTA (pH 7.4), with mammalian protease inhibitor cocktail obtained from Sigma-Aldrich Corporation (St. Louis, MO), and brought into suspension in homogenization buffer using a cell scraper (GeneTools obtained from Philomath, OR). The suspended cells are then homogenized and centrifuged (40,000 x g for 10 min at 4ºC), and the resultant pellet is resuspended in homogenization buffer, and homogenized and centrifuged as before. The remaining membrane pellet is then twice washed and centrifuged in homogenization buffer, and the final membrane pellet resuspended in buffer comprising 20 mM HEPES/Na-HEPES and 0.1 mM EDTA (pH 7.4), and stored in the presence of bovine serum albumin (final concentration = 1.0% (w/v)) at -135°C. The protein concentration in CHO-hGPR10 cell membranes is determined using a commercial Bradford assay (Sigma-Aldrich Corporation).

Page 61, lines 7-23, are amended as follows:

EXAMPLE 10

Effects of Compound X on PrRP-stimulated [^{3}H]arachidonic Acid Release from CHO Cells Stably Expressing Cloned Human Mutant GPR10

Examples 8 and ~~10~~ 9 suggest that PrRP and Compound X activate CHO-hGPR10 cells by respective activation at an orthosteric and allosteric site located at different positions within the cloned human GPR10. The present study was designed to determine the importance of the proposed orthosteric NH_2-terminus binding site in mediating the synergistic interaction between PrRP and Compound X, as described in Example 9. For this study, Compound X was tested in triplicate, at concentrations in the 0.01 to 10,000 nM range, for its effects on basal [^{3}H]arachidonic acid release from CHO-T-hGPR10 cells.